

Application No.: 10/763,391

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claims 1, 7, 9, 10 and 16 in order to further clarify the subject matter of the present disclosure. In addition, claims 2-4, 6, 8, 11, 14, 15 and 18 have been cancelled, without prejudice. No new matter has been added.

Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

II. The Rejection Of Claims 7-9 and 16-20 Under 35 U.S.C. § 101

Claims 7-9 and 16-20 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. It is alleged that claims 7-9 and 16-20 are not tied to another statutory class nor do they execute a transformation. The Examiner has stated that "an example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps." The Examiner then states that the "applicant's method steps fail the first prong of the new Federal Circuit decision since they are not tied to a machine and can be performed without the use of a particular machine. Thus, claims 7-9 and 16-20 are non-statutory since they may be performed within the human mind."

The analysis of Applicants' method claims is demonstrably false. Claims 7 and 16 both recite "a method of determining bills (for improving capacity of determination of bills) in a bill handling apparatus, comprising the steps of transporting through a transport path a bill to be deposited to a determining part of the bill handling apparatus". This bill is a physical article. How the bill can be transported "within the human mind" is unclear, to say the least. The bill handling apparatus is definitely a machine, as indicated in the figures and specification. As such,

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since the method undoubtedly uses a machine to perform the method, this limitation alone meets the "first prong" of the statutory guidelines.

The Examiner then goes on to state that "the mere recitation of the machine fails to make the claim statutory under 35 U.S.C. § 101", and that "insignificant extra-solution activity will not transform an unpatentable principle into a patentable process". This statement is completely contrary to the facts in view of the limitations recited in the claims. Applicants would ask the Examiner, how, *without the claimed bill handling apparatus*, would one skilled in the art perform the steps of "transporting through a transport path a bill to be deposited to a determining part of the bill handling apparatus", "processing a digital signal from the detection part and determining a denomination and truth of the bill in a determination part of the bill handling apparatus" or "after the change, transporting the unidentified bill through the transport path to the detection part again"? The Examiner provides no explanation, other than a cursory comment that "the amendments are not properly done" in the Response to Arguments section. Applicants submit that the Examiner has failed to provide any evidence that the above-mentioned claims fail to comply with the statutory requirements of 35 U.S.C. § 101 for method subject matter, much less show how the bill handling apparatus is "insignificant" to the claimed method. Rather, Applicants would submit that the bill handling apparatus is essential to the operation of the method, as is suggested by numerous examples in the specification and drawings.

As such, Applicants respectfully request that the § 101 rejections of claims 7, 9, 16, 17 and 19-20 be withdrawn.

III. The Rejection Of Claims 1-20 Under 35 U.S.C. § 103

Claims 1-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami (USP No. 4,769,532) in view of Zoladz, Jr. (USP No. 5,855,268); and claims 16-20

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stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami in view of Zoladz, Jr. and Negishi (USP No. 6,588,570). Applicants respectfully traverse these rejections for at least the following reasons.

With regard to claims 1-20, the Office Action states in the Response to Arguments section that "[i]n response to Applicant's remarks, page 8, ¶ 4, line 3 that 'but not the actual invention the applicant applied for' was a typo. It is now deleted, replaced with 'complete' and respectfully noted again that as we understand, references are to be considered as a whole and as they teach and suggest the concept of the invention, but not the complete invention the Applicant applied for."

Again, the Examiner is admitting that the cited prior art references do not teach the Applicants' complete invention. Applicants' would point out that in order for a claim to be considered anticipated or obvious over the prior art, all of the limitations (re: the *complete* invention) in the claim must be disclosed in the prior art. In view of this admission by the Examiner that the cited prior art does not teach the complete invention the Applicant applied for, Applicants submit that, for this reason alone, the remaining claims are allowable over the cited prior art. In addition, for the record, Applicants submit that all of the pending claims are also allowable for at least the following reasons.

Claims 1-15

Independent claims 1 and 10 are directed a sheet handling apparatus. The apparatus defined by amended claim 1 requires a determining means that determines the truth of the sheet with a control part. The control part changes the condition of a signal read accuracy by means of changing a range of the inputted voltage corresponding the denomination of the unidentified sheet. Then, the apparatus transports the unidentified sheet through the transport path to the

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detection part again. Then, the detection part detects the unidentified sheet again under the changed condition and the determining means determines again the truth of the unidentified sheet by using the digital signal being obtained according to said changed condition.

Amended claim 10 similarly recites a sheet handling apparatus comprising a control part that changes a condition of a signal read accuracy to determine the sheets in the determining part. If the sheets are determined as unidentified, the control part changes the condition of the signal read accuracy by means of changing a range of the inputted voltage corresponding to the denomination of the unidentified sheets. Then, the apparatus transports through the transport path the unidentified sheets from the stacking part to the determining part again and the detection part detects the unidentified sheet again under the changed condition and the determining part determines again the truth of the unidentified sheets by using the digital signal being obtained according to said changed condition.

Thus, one feature of claims 1 and 10 is that each claimed apparatus determines the truth of an unidentified bill with a control part that changes the condition of a signal read accuracy by means of changing a range of the inputted voltage corresponding to the denomination of the unidentified sheets.

It is alleged that Kawakami discloses, in col. 6, lines 50-58, that the control part changes and set conditions to narrow a range between an input upper limit value and an input lower limit value of the A/D converter as the setting conditions. However, Kawakami fails to disclose changing a condition of a signal read accuracy by means of changing a range of the inputted voltage. Rather, Kawakami merely changes an analogue signal to a digital signal based on whether the analogue signal exceeds a predetermined threshold.

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Moreover, Kawakami discloses that CPU 1 computes the difference of the output voltage between La and LB of the amplifier 10. Then the CPU 1 changes the amplification factor according to the reference value, and keeps the threshold constant when characteristics of the light emitting diode 6 and the phototransistor 9 are changed. As such, it is clear that Kawakami does not change a range of the inputted voltage corresponding the denomination of the unidentified sheet. Rather, Kawakami determines the amplification based on the optical sensors and adjusts the optical sensors only to enable accurate operation on the bill.

Moreover, Zoladz fails to remedy this deficiency. Zoladz, Jr. is directed to an optical sensor system for a bill validator using LEDs. Zoladz, Jr. discloses use of a microprocessor to make continual LED current adjustments through a D/A converter. See col. 2 lines 30-51. According to Zoladz, Jr., the transport motor 18 is reversed and the bill is rejected, if the bill is not genuine (col. 3 lines 43-45). There is no disclosure or suggestion that the microprocessor changes the settings of the detector and redirects the bill back to the detector via transporter motor 18 for another reading, but under the changed settings of the detector, as required by claims 1 and 10.

As such, it is clear that Kawakami and Zoladz fail to teach or disclose the bill handling apparatus of either of claims 1 and 10 of the present disclosure.

Claim 7 is directed to a method of determining bills in a bill handling apparatus, wherein if the bill is determined as an unidentified bill, a step of changing a condition of the signal read accuracy by means of changing a range of an inputted voltage for an A/D converter responsive to the detection part corresponding to the denomination of the unidentified bill is performed. Then after the change, the unidentified bill is transported through the transport path to the detection part again and the detection part detects the unidentified bill again under the changed condition

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and detects again the truth of the unidentified bill by using a digital signal being obtained according to said changed condition.

For the same reasons given with respect to claim 1, Kawakami and Zoladz, Jr., taken alone or in combination, fail to disclose or suggest changing a condition of the signal read accuracy by means of changing a range of the inputted voltage corresponding to the denomination of the unidentified bill, as required by claim 7. For this reason, the Office Action does not present a *prima facie* case of obviousness for claim 7 as well as for the claims dependent thereon.

For all of the foregoing reasons, the Office Action does not establish a *prima facie* case of obviousness of claim 1 as well as claim 5 which is dependent on base claim 1; for claim 10 as well as claims 12-13 which are dependent on claim 10 and for claim 7 as well as claim 9, which is dependent upon claim 7. It is respectfully requested that the rejection of claims 1, 5, 7, 9, 10, 12 and 13 be reconsidered and withdrawn.

Claims 16-20

Independent claim 16 recites a method of determining bills in a bill handling apparatus, comprising transporting bills to be deposited through a transport path to a determining part of the bill handling apparatus to perform determination. A second determination accuracy to set as higher bill determination accuracy than a first determination accuracy if a bill is determined as an unidentified bill that has a characteristic of a true bill but is out of a range of a permissible error as a result of determination in the first determination mode by changing the condition of a signal read accuracy by means of changing a range of an inputted voltage corresponding to the

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denomination of the unidentified bill. Subsequently, bills that are unidentified or determined to be false are separated from other bills.

As discussed supra, Kawakami and Zoladz, Jr. taken alone or in combination do not teach changing the condition of a signal read accuracy by means of changing a range of an inputted voltage corresponding to the denomination of the unidentified bill. Moreover, Negishi is not relied upon, and does not teach a step of changing the condition of a signal read accuracy by means of changing a range of an inputted voltage corresponding to the denomination of the unidentified bill.

Negishi teaches a first and second reference level for determining a bill in a bill handling apparatus. However, both of these reference levels are utilized for determining the insertion state of the bill. As is disclosed in col. 4, lines 42-45, "by the use of the first and second reference levels...the comparator 22 detects the above mentioned state and the controller judges the bill is inserted." Thus, it is clear that Negishi fails to teach or suggest the limitation of claim 16 of changing the condition of a signal read accuracy by means of changing a range of an inputted voltage corresponding to the denomination of the unidentified bill.

For all of the foregoing reasons, the Office Action does not present a *prima facie* case of obviousness for claim 16.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims. *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as independent claim 16 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon, claims 17 and 19-20, are also patentable.

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It is respectfully requested that the rejection of claims 16, 17 and 19-20 be reconsidered and withdrawn.

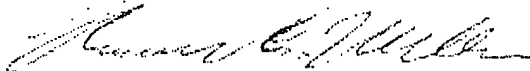
V. Conclusion

Having fully responded to all matters raised in the Office Action, Applicant submits that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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